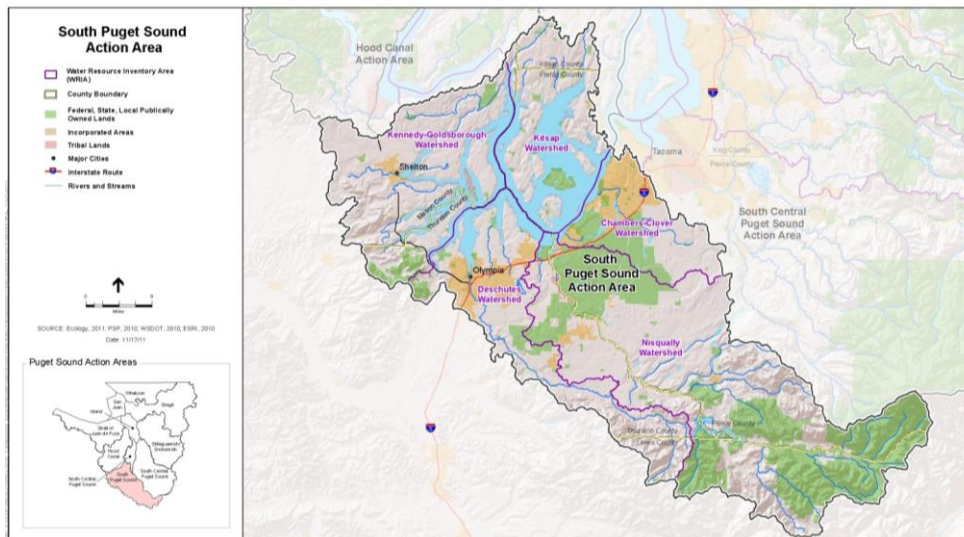


The Action Agenda in South Puget Sound

Profile

The South Sound is one of the fastest growing areas in Washington State, exceeding the State's growth rate consistently since the 1960s. By 2005 the population has doubled to about 300,000. It is estimated that the South Sound population will grow by another 150,000 people within the next 25 years. The growth rate is high because of the stable economy, high quality of life, and lower cost of living compared to the Central Puget Sound region. Approximately 75 percent of the population growth is from people moving to the South Sound – only a quarter of the growth is from births.

Much of the population is centered near the towns and cities of Shelton, Olympia, Lacey, Tumwater, Steilacoom, University Place, Lakewood, Tacoma, DuPont, the community of Allyn, and along shorelines. Land use varies from urban populations to rural and mixed use. Commercial forestry and tribal and non-tribal commercial shellfisheries dominate the natural resources industries. The capital of Washington State, Olympia, is located in the South Sound.



Unique Ecosystem Characteristics and Assets

South Puget Sound is unique. It has seven finger inlets – each with its own headwater estuary – four large islands and over 450 miles of shoreline. Its terrain is characterized by rolling hills and ridges. There are steep bluffs bordering Puget Sound which are intersected by small, steep ravines that drain the upland areas. The terrain and soils of the area have been heavily influenced by past glacial activity.

Hydrology in the area is characterized by a number of short streams with headwaters in upland lake or wetland areas that drain into Puget Sound. The downstream reaches of these streams are usually confined within steeply sloping ravines with sidewall seeps. There are a number of estuarine bays and lagoons located along the shorelines where these streams intersect with Puget Sound. Larger river systems include the Nisqually River and the Deschutes River. Tidal ranges in South Sound are extensive, with maximum ranges of upwards of 20 feet. Yet, much of the South Sound has slow circulation and sensitivity to nutrients, causing a trend to low dissolved oxygen.

The waters of South Puget Sound provide some of the finest shellfish habitat in the world and present an array of recreational, commercial and tribal harvest opportunities. Washington leads the country in production of farmed clams, oysters and mussels with an annual value of over \$107 million. Washington shellfish growers directly and indirectly employ over 3,200 people and provide an estimated total economic contribution of \$270 million. The South Puget Sound shellfish industry is the largest fish industry in all of Puget Sound. It also has the highest rate of economic return to ports of landing within South Sound. The commercial shellfish industry is thriving, demand is expanding in markets worldwide, and clean water is the essential catalyst for continued success. Recreational use of the shorelines for clam digging, swimming, boating, fishing, and beach combing on state, county, city and private beaches is popular. Efforts to

Notable Accomplishments

The Lead Entities for salmon recovery in South Puget Sound and county, NGO, and private partners worked together to secure the acquisition of the Devils Head parcel on the Key Peninsula, resulting in permanent protection of 94 acres of shoreline, forested upland, and other important habitat.

DNR, the South Puget Sound Salmon Enhancement Group, and the Squaxin Island Tribe partnered to remove 3,150 square feet of overwater docking made of 48 creosote treated wood pilings and 84.6 tons of creosote treated wood on Squaxin Island. A 400-foot rock bulkhead along the Squaxin Island shoreline was also removed, completely restoring the shoreline to a natural condition.

The Pierce County Shellfish Partners worked to achieve a recent upgrade of more than 100 acres of historic shellfish beds in Vaughn Bay, closed to harvest due to poor water quality for more than twenty years. Thurston County and partners also worked to achieve an upgrade of 240 acres of historic shellfish beds in Henderson Inlet.

The Nisqually Tribe and a host of partners recently completed a massive restoration project that restored tidal hydrology to over 900 acres of the Nisqually River delta. This project has immediate benefits to salmon from the Nisqually watershed and many other river basins in Puget Sound.

restore populations of native shellfish – such as Olympia oysters – have increased in recent years, but non-native shellfish still dominate the assemblage of species that make up much of the economic backbone of South Sound.

Use of marine waters and nearshore areas by juvenile salmon and trout rates high in South Puget Sound, not only for salmonids coming from freshwater systems in the area, but also during summer when salmon from elsewhere in Puget Sound, and even British Columbia, are known to feed in the rich South Sound.

Local Action Agenda Process

The local integrating organization (LIO) in South Puget Sound is known as the Alliance for a Healthy South Sound, and has been meeting regularly for over a year. The Alliance has developed an in-depth process through which it will refine a list of key threats to ecosystem health, articulate strategies and actions supporting ecosystem recovery, and quantify the Action Area's contribution to achieving specific Sound-wide pressure reduction/ecosystem recovery targets by 2020. It is also in the process of developing both an organizational and science-based work plan, in addition to identifying major threats to ecosystem health and prioritized strategies for ecosystem recovery.

Key Threats/Pressures

The South Sound LIO is working through a process to identify which of Puget Sound Partnership's pressure reduction/ecosystem recovery targets are most applicable in the South Sound Action Area. Through this process, the LIO will objectively assess and articulate key threats to ecosystem health and recovery in South Puget Sound. The list below represents previous work by LIO members and others to capture some of the threats of potential consequence in the Action Area, but may be significantly refined based on the LIO's ongoing process to assess the relevance of Sound-wide pressure reduction targets.

- Habitat conversion from historic conditions, including loss of forest cover; reduced large woody debris and carbon inputs to stream systems; loss of storage in wetlands; reduction in habitat resilience; and degradation and loss of topsoil/duff layer.
- Land use practices and regulations in conflict with environmental goals, including lack of enforcement of regulations.
- Disruption of natural hydrologic regimes and loss of natural floodplain and wetland functions, due to land conversion to impervious surfaces; asphalted and realigned stream channels; and native vegetation removal.
- Technical and financial difficulty with retrofitting many South Puget Sound cities for stormwater water quality treatment.
- High sensitivity for pollution due to low flushing rates and long residency times in South Puget Sound marine waters.
- A combination of natural and anthropogenic characteristics affecting dissolved oxygen conditions that may lead to stress and mortality of fish and other aquatic organisms in South Puget Sound marine waters.

- Use of onsite septic systems at contemporary urban densities degrades fresh and marine water quality.
- Increase in biotoxins, pathogens, and viruses result in loss of private, recreational, commercial, and tribal shellfish harvest.
- Above average growth rates shown over the last several decades expected in South Sound counties, which will present fundamental challenges in controlling nutrient inputs to South Puget Sound.
- Aquatic and terrestrial habitat alterations significantly reducing salmon population abundance, productivity, and resilience.
- Difficulty maintaining and increasing public access to shorelines due to future population growth and development pressure.
- Amplification of many current stressors to ecosystems, infrastructure, and human communities in South Sound from the impacts of climate change.

Opportunities, Priorities and Near Term Actions

As described above, the South Sound LIO is working through a process to identify which regional pressure reduction/ecosystem recovery targets are most applicable in the South Sound Action Area. Through this process, the LIO will refine its list of key threats and develop its own local and complimentary strategies and actions. It will also articulate South Sound's contribution to achieving soundwide targets.

Prior to the formal creation of the Alliance for a Healthy South Sound, local entities developed and led a process to identify key science needs, threats to ecosystem health, and both existing and desired actions/programs needed to advance ecosystem recovery in the South Sound Action Area. The result of this work was an extensive report and inlet-by-inlet list of actions, programs, and strategies that contribute to the recovery of Puget Sound, which is included in the Reference section of this profile. Along with the process detailed above, the Alliance will likely draw heavily on this list when articulating opportunities and priorities for ecosystem recovery.

Interim, unranked ecosystem restoration priority strategies and actions are listed below. These 25 elements contribute directly to the Puget Sound Partnership's three Strategic Initiatives, in addition to salmon recovery goals articulated in the South Sound chapter of the Puget Sound Chinook Recovery Plan.

Strategic Initiative: *Protection of Habitat and Removal of Barriers to Salmon Recovery*

- Secure perpetual public ownership of McNeil Island for preservation, restoration and low impact public access.
- Develop and implement South Puget Sound Conservation Plan elements, including high priority actions from:
 - McLane Creek Protection Plan
 - Goldsborough Creek Protection Plan
 - Skookum Creek Habitat Action Plan
 - Nisqually Protection (and Restoration) Plan
 - Deschutes Protection Plan

- Implement top tier projects from the South Sound Watersheds 3-year plan
- Implement all South Sound nearshore projects described by the Puget Sound Nearshore Estuarine Restoration Program's 10% feasibility list, including:
 - Chambers Estuary
 - Sequelitchew Estuary
 - Deschutes Estuary
 - Mission Creek
 - DNR marine lab
 - Bayshore Acquisition and Restoration at Oakland Bay
- Support advocacy efforts to partner with railroad on significant shoreline improvements.
- Support Shoreline Management Program updates designed to protect existing, functioning drift cells in South Sound.
- Support Eco-net endorsed educational efforts meeting the intent of this priority.
- Reconfigure I-5 through the Nisqually lowlands to reconnect the flood plain through the valley.

Strategic Initiative: *Prevention of Pollution from Urban Stormwater Runoff*

- Advocate for increased treatment levels at Wastewater Treatment Plants in South Sound, including zero discharge at Solo Point.
- Clean up industrially polluted sites consistent with the State's Model Toxics Control Act process, beginning with Budd Inlet and Oakland Bay.
- Complete and Implement Deschutes Total Maximum Daily Load (TMDL) and implement Oakland Bay TMDL.
- Achieve a balance of local, state and federal funding for full implementation of National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits.
- Implement retrofitting on non-compliant stormwater systems.
- Implement stormwater management on a watershed basis.
- Support non-NPDES mandated stormwater programs in smaller communities (e.g.; Eatonville).
- Implement oil spill response preparation and training.
- Support Eco-net endorsed educational efforts meeting the intent of this priority.

Strategic Initiative: *Recovery of Shellfish Beds*

- Use the results of Department of Ecology's South Puget Sound Dissolved Oxygen model to determine sub-basin nutrient reduction targets for South Sound.
- Complete the Eld/Totten/Little Skookum TMDL and implement recommendations.
- Re-open shellfish beds, including: Henderson, Burley Lagoon, Minter, Oakland Bay, North Bay.
- Prevent closure of shellfish beds at Filucy Bay and Rocky Bay.
- Support programs and projects that implement, teach or otherwise encourage best management practices to remove nutrients and/or pathogens from surface waters.
- Improve Operations and Management of septic systems in all 4 counties (potentially building on the successful Henderson Inlet Model).
- Enhance on-site septic repair grant and loan programs.
- Support Eco-net endorsed educational efforts meeting the intent of this priority.

The tables below list some of the projects that the Alliance believes will help address the priority strategies and actions listed above. The Alliance anticipates that funding will be sought to implement these projects, or parts of these projects, within the next year to two years.

AHSS PRIORITY	ACTIONABLE & SEEKING FUNDING	STATUS
Develop and Implement South Sound Conservation Plan elements	McLane Creek Protection Plan, Goldsborough Creek Protection Plan, Skookum Creek Habitat Action Plan, Nisqually Protection (and Restoration) Plan, Deschutes Protection Plan	Recommendations of these plans that are not listed elsewhere in the South Sound Watersheds salmon recovery 3-year work plan are actionable and will be seeking funding
Implement all South Sound nearshore projects described by the PSNERP 10% feasibility list	John's Creek Estuary/Bayshore Acquisition at Oakland Bay	In progress through a partnership with Squaxin Island Tribe, Capitol Land Trust and Taylor Shellfish Farms and seeking further funding.
Implement urban TMDLs	Complete and implement Deschutes TMDL	While the TMDL is not yet finalized, there are actionable projects that may be seeking funding in the near-term.
Implement urban TMDLs	Implement Oakland Bay TMDL	There are actionable projects seeking funding
Implement retrofitting on non-compliant stormwater systems	Stormwater retrofits	Seeking funding in the near-term from multiple sources
Support a balance of local, state and federal funding for full implementation of NPDES municipal stormwater permits.	NPDES implementation	Seeking funding from a variety of sources
Support non-NPDES mandated stormwater programs in smaller communities (e.g.; Eatonville)	Small community stormwater planning including, but not limited to LID/Rain garden planning	Using the work done by the Eatonville community as a template for other communities that may wish to fund implementation plans including, but not limited to, LID and rain gardens in their rural communities.
Implement oil spill response preparation and training	Oil spill response and training	More funding is needed for equipment bases and training in parts of South Sound that are both heavily trafficked and which do not currently have easy access to either.
Support programs and projects that implement, teach or otherwise encourage best management practices to remove nutrients and/or pathogens from surface waters	Establishing, rewarding and teaching best management practices relating to nutrient and/or pathogen outputs	There are multiple projects in this area that may be seeking funding.
Improve operations and management of septic systems in all four counties	Establishing, supporting and implementing septic system management and maintenance	Multiple project possibilities for funding in all four counties that address septic system function

AHSS PRIORITY	ACTIONABLE & SEEKING FUNDING	STATUS
Implement all South Sound nearshore projects described by the PSNERP 10% feasibility process for South Sound (Deschutes, Chambers, Sequelitchew, Mission Creek, DNR Marine Lab, Bayshore Acq & Restoration at Oakland Bay)	Puget Sound Nearshore Estuarine Restoration Program (PSNERP) 10% feasibility projects in the South Sound	In all cases, there are next steps that can be presented for funding.
Clean up industrially polluted sites, consistent with the State Model Toxics Control Act process, beginning with Budd Inlet and Oakland Bay	Clean up industrially polluted sites in Budd Inlet and Oakland Bay	Multiple projects may be seeking funding which address this action
Enhance on-site septic repair grant and loan programs	Enhance on-site septic repair grant and loan programs	Multiple opportunities in all jurisdictions.
Eco-net endorsed educational efforts meeting the intent of AHSS priorities	Eco-net supported projects that address AHSS near-term actions	Multiple projects may be proposed by the South Sound eco-nets that represent important education work that is associated with the AHSS near term actions.
Implement South Sound Watersheds salmon recovery 3-year work plan	Implement South Sound salmon recovery 3-year work plan, which sequences and reports on actionable top priority projects in each WRIA as determined by each Lead Entity.	Multiple projects in each WRIA for near term actions and funding
Support Shoreline Management Program updates designed to protect existing, functioning drift cells in the South Sound	Support Shoreline Management Program (SMP) updates designed to protect existing, functioning drift cells in the South Sound	Multiple actions in multiple jurisdictions

ADVOCACY	NOTES
JBLM – Solo Point wastewater treatment plant	They are expanding to meet needs of a growing population, updating treatment levels to the levels that the LOTT plant will be treating. They are considering a move to zero discharge and should be encouraged to do so.
Chambers wastewater treatment plant	They are expanding to meet needs of growing population, but treatment may not sufficient to lower total nutrient output.
Long term stable funding for continued TMDL studies	Funding should be available and sufficient to complete and implement existing TMDLs as well as to continue this program
Achieve a balance of local, state and federal funding for full implementation of NPDES municipal stormwater permits.	Funding should be available and sufficient without undue burden on local funding.
Implement stormwater management on a watershed basis.	

ADVOCACY	NOTES
Support advocacy efforts to partner with railroad on significant shoreline improvements	An MOU is being sought by the Puget Sound Partnership
Support efforts of small non-NPDES mandated communities to manage stormwater	Small communities may wish to emulate the Eatonville stormwater management program with, but not limited to, LID and rainwater gardens.
Support increased funding for all 4 counties' septic management plans	Further funding is needed for operations and management as well as enhanced grant and loan programs for on-site septic repair.
Support full range of South Sound PSNERP projects that went to the 10% feasibility list	These projects include Deschutes Estuary Restoration, Chambers Estuary restoration, Sequelitchew and Mission Creek Restoration, the DNR Marine Lab restoration and the acquisition and consequent restoration of John's Creek/Bayshore at Oakland Bay.
Advocate for completion and implementation of the Eld/Totten/Little Skookum TMDL	The TMDL requires a local lead to pass through the EPA approval process and move on to the implementation stage.

WATCH LIST	STATUS
McNeil Island	A scope of work for management review is being conducted by the Office of Financial Management and is due out in October of 2012. It should include clear recommendations that AHSS can review
Reconfigure I-5 through the Nisqually lowlands to reconnect the flood plain throughout the valley	There is a 3-year plan feasibility study on the removal of I-5 fill to restore tidal marsh.

Link to Recovery Targets

As described in the “Notable Accomplishments” section above, entities within South Puget Sound are already making contributions toward achieving regional recovery targets in shellfish bed restoration, removal of shoreline armoring, stormwater and wastewater treatment, and other areas. In order to objectively assess which of the soundwide targets are most applicable in South Sound, and to quantify what its future contributions toward achieving those targets will be, the Alliance has convened a technical sub-committee and developed a process by which it will articulate these goals. The Alliance anticipates that this work will be ongoing through 2012.

Local Implementation Structure

The structure of the LIO is described in greater detail within the Implementation Coordination text box. The Executive Committee, which provides policy direction for the organization, has held five meetings since 2010. The Work Group, consisting primarily of staff from entities represented on the Executive Committee, provides topical expertise and support to the Executive Committee and has met ten times since 2010. The Council of South Puget Sound stakeholders – currently under development – will consist

of a number of sub-committees that provide technical guidance to the Executive Committee. To date, participants in the Alliance have included:

- **Tribes** – Nisqually, Squaxin Island, Puyallup
- **Counties** – Kitsap, Mason, Pierce, Thurston
- **Cities** – Olympia
- **Government Entities / Agencies** – Mason Conservation District, Puget Sound Partnership, Thurston Conservation District, Washington Department of Ecology, Washington Department of Fish & Wildlife, Washington Department of Natural Resources
- **Watershed Management and Salmon Recovery Organizations** – Chambers/Clover Watershed Council, Lead Entities for WRIA 10, 11, 12, 13, 14, and 15
- **Non-Governmental Organizations** – Deschutes Estuary Restoration Team, People for Puget Sound
- **Educational Institutions** – Washington State University Cooperative Extension for Thurston County, Washington Sea Grant
- **Industry** – Taylor Shellfish Company

IMPLEMENTATION COORDINATION IN THE SOUTH SOUND

The South Sound LIO – Alliance for a Healthy South Sound – covers the South Sound Action Area. An Executive Committee guides the LIO, and is composed of elected officials from four counties (Thurston, Mason, Pierce, Kitsap) and three tribes (Nisqually, Squaxin Island, Puyallup). The organizational structure also includes a Work Group of staff from South Puget Sound Tribes, counties, cities, NGOs, and other entities in addition to a broadly representative Council that will assist the Work Group and Executive Committee with the implementation of local Action Agenda strategies and actions. The four South Puget Sound counties and three tribes have been working collaboratively since Spring 2010 to establish this local forum, identify members, and clarify objectives. Puget Sound Partnership’s Leadership Council formally recognized the LIO in September of 2011.

References and Additional Resources

Alliance for a Healthy South Sound: <http://www.healthysouthsound.com/>

Henderson Inlet Community Shellfish Farm: <http://www.restorationfund.org/projects/csf/hendersoninlet>

Nisqually Tribe Natural Resources Department: <http://www.nisqually-nsn.gov/content/natural-resources>

Pierce County Shellfish Partners Program: <http://www.co.pierce.wa.us/pc/services/home/environ/water/ps/shellfish.htm>

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Squaxin Island Tribe Natural Resources Department:
http://www.squaxinland.org/natural_resources/index.html

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